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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/033,661	12/27/2001	Qianwen Zhang	008031-0023-999	7941

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NEW YORK, NY 100362711

EXAMINER
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NGUYEN, CAM N

ART UNIT	PAPER NUMBER
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1754

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DATE MAILED: 06/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.  
10/033,661

Applicant(s)  
Zhang et al.

Examiner  
Cam Nguyen

Art Unit  
1754



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on Dec 27, 2001
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above, claim(s) 14-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on Dec 27, 2001 is/are a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some\* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_ 6) ☐ Other:

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### **DETAILED ACTION**

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-13, drawn to a catalyst, classified in class 502, subclass 330.
  - II. Claim 14-15, drawn to a process of preparing a catalyst, classified in class 502, subclass 104+.
  - III. Claim 16, drawn to a process of preparing a chemical composite support of alumina and titania, classified in class 502, subclass 439+.
  - IV. Claims 17-18, drawn to a process of selective hydrogenation of alkynes and dienes using a catalyst, classified in class 585, subclass 365+.

The inventions are distinct, each from the other because:

2. Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the product as claimed can be made by another and materially different process, such as by spray pyrolysis or sol gel technique.
3. Inventions I and III are unrelated (distinct). Inventions are unrelated (distinct) if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the

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instant case the different inventions are: the Group I invention is drawn to a catalyst; whereas, the Group III invention is a process of preparing a chemical composite support of alumina and titania, which is not the same as the product of Group I invention.

4. Inventions I and IV are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case, the product as claimed can be used in a materially different process of using that product, such as purification of automotive exhaust gases.

5. Inventions II and III are unrelated (distinct). Inventions are unrelated (distinct) if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case, the different inventions are: the process of Group II and the process of Group III are not the same since they do not produce the same product.

6. Inventions II and IV are unrelated (distinct). Inventions are unrelated (distinct) if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are: the process of Group II and the process of Group IV are not the same since they do not produce the same product.

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7. Inventions III and IV are unrelated (distinct). Inventions are unrelated (distinct) if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are: the process of Group III and the process of Group IV are not the same since they do not produce the same product.

8. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, Group III, Group IV, etc. and have acquired a separate status in the art as shown by their different classification, and because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

9. During a telephone conversation with *Mr. James Markey* on 6/18/03 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 14-18 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

10. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

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***Claim Objections***

11. Claims 1, 5, 11, & 13 are objected to because of the following informalities:
- A. In claim 1, line 4, "Pd" should be --palladium--.
  - B. In claim 1, line 7, "being" should be --is--.
  - C. In claim 5, line 1, --, wherein the alumina support-- should be inserted before "comprising".
  - D. In claim 11, line 1-2, "wherein the active component, palladium and the promoter, Group IB metal " should be --wherein the active component palladium, the promoter, and Group IB metal--.
  - E. In claim 13, line 2, "alkali earth metals" should be --alkaline earth metals--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112 (Second Paragraph)***

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

13. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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A. Regarding claim 1, line 2-3, the correct Markush terminology is --an inorganic oxide support selected from *the group consisting of* alumina, titania, and a chemical composite of alumina and titania--. See MPEP § 2173.05(h).

B. Claim 5 recites the limitation "the catalyst support" in line 1. There is insufficient antecedent basis for this limitation in the claim.

#### ***Allowable Subject Matter***

14. Claims 1-13 are not being rejected under the art rejection because they contain allowable subject matter. The following is a statement of reasons for the indication of allowable subject matter:

The prior art does not disclose or fairly suggest a selective hydrogenation catalyst requiring the major component palladium and the promoter are uniformly distributed together in the catalyst within the thickness between the support surface and the depth of more than about 300  $\mu\text{m}$ .

There is no motivation to combine the teachings of the references together.

#### ***Citations***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Baker et al. (US Pat. 6,528,453), Hagemeyer et al. (US Pat. 6,074,979), Chakraborty et al. (US Pat. 4,992,407), Baker et al. (US Pat. 6,534,438 B1), Lauth et al. (US Pat. 5,559,065), Patterson (US Pat. 5,580,838), Lester et al. (US Pat. 6,203,771 B1), Weidenbach et al. (US Pat. 4,088,607), Lee (US Pat. 3,615,207), & Keith et al. (US Pat. 3,635,841) are cited for related art.

***Conclusion***

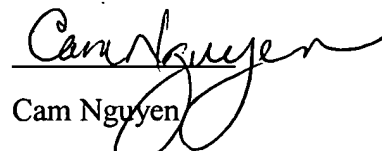
16. Claims 1-18 are pending. Claims 1-13 are rejected. Claims 14-18 are withdrawn due to nonelected (or distinct) invention. No claims are allowed.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Cam Nguyen, whose telephone number is (703) 305-3923. The examiner can normally be reached on M-F from 8:30 am. to 6:00 pm, with alternative Monday off.

The appropriate fax phone number for the organization where this application or proceeding is assigned is (703) 872-9310 (before finals) and (703) 872-9311 (after-final).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Nguyen/cnn *CNN*  
June 24, 2003

  
Cam Nguyen  
Patent Examiner  
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